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<b>2000-014350/02</b> A12 F01 G02 (A26) <b>BADI 1998.05.14</b> <b>BASF AG</b> *DE 19821477-A1 1998.05.14 1998-1021477(+1998DE-1021477) (1999.11.18) C08L 59/00, C08J 3/20, 5/00, 5/18, D01F 6/50, C08L 101/12, C08K 3/34, 7/02 <b>Thermoplastic nanocomposite, useful for the production of film, fiber, molded articles or coatings</b> <b>C2000-003060</b> Addnl. Data: GLUECK A, GRUTKE S, QUEISSER J	A(4-A5, 4-C4A, 4-G1A, 8-M9B, 8-S1) F(1-D5, 1-D10, 3-C) G(2-A2D) <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">9</span> molded articles or coatings (claimed). <b>ADVANTAGE</b> The nanocomposite (I) has improved mechanical and surface properties.
<b>NOVELTY</b> A thermoplastic nanocomposite (I) contains: (A) 50-99.99 wt.% of a carbon monoxide polymer of carbon monoxide and an olefinically unsaturated compound; (B) 0.01-50 wt.% of a delaminated layer silicate; (C) 0-40 wt.% of a fibrous filler; (D) 0-30 wt.% other additives; and (E) 0-30 wt.% of an elastomeric rubber polymer. <b>DETAILED DESCRIPTION</b> Independent Claims are included for: (i) A process for the production of (I) by preparing (A) in the presence of (B); (ii) film, fiber, molded articles or coatings prepared from (I). <b>USE</b> The nanocomposite (I) is useful for the production of film, fiber,	<b>EXAMPLE</b> A suspension of montmorillonite (29 g), alkyl-n-hexylamine (7.1 g) and p-toluenesulfonic acid (9.3 g) in methanol (4l) was stirred at 75°C for 6 hours and allowed to cool to room temperature. Propene (440 g) with a 1:1 mixture of CO and ethene was added to a total pressure of 70 bar and stirred at 90°C followed by the addition of 1,3-bis(diphenylphosphino)propane-palladium (II) acetate (0.025 g) and p-toluenesulfonic acid (0.14 g) in methanol (50 ml). The pressure was increased to 100 bar and the reaction carried out for 7 hours followed by cooling, filtering the product, washing with acetone and methanol and drying (80°C, vacuum) to yield 640 g of polymer product. The resulting polymer had an E-modulus of 5.4 GPa extension at break of 2.5%, breaking strength of 86.6 MPa (ISO 527-2) melt, index DE 19821477-A+

(ISO1133) of 97.1 g/10 min. toughness (ISO 179/1eU) of 37.9 kJ/sq.m, heat deflection temperature (ISO 75-21) of 203°C and very good gloss (ISODIN 67530).

#### TECHNOLOGY FOCUS

Polymers - Preferred Composition: (A) is a binary or ternary linear alternating copolymer of carbon monoxide and ethylene, propene, 1-butene, 1-pentene, 1-propene, 1-hexene, 1-octene or styrene. (A), (B) and optionally (C), (D) and (E) are mixed at 160-260°C.  
 (13pp2370DwgNo.0/0)

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